

plants which are not found also in the extreme
south of China. The only ~~two~~ ^{Celastrus} ~~Celastrus~~ I
have from Japan is C. distinctus, Thunb:
certainly very like C. scandens in general
appearance. ^{C. Wallispianus?} There are several Clasagras from
Japan, but I can't make much of them, &
the recent revision of the genus in Defendollis
Prodromus appears very unsatisfactorily
executed. I have Thermopsis fabacea &
Trifolium lupinaster from Manchuria,
Lotus corniculatus also, besides from Corea.
Lathyrus maritimus too grows on the
Manchurian coast. Spiraea kamtschatica
and one or two others come down as far
south as the embouchure of the Amur
Rubus parvifolius appears to follow up all
along the Chinese coast as far as collections
have yet been made; I have another species
very like in general appearance R. fruticosus,
gathered at Foochowfoo. Rozuzosa I have
from Manchuria. Cercaria alpina is I
believe very common up north with the
common Epilobium angustifolium &
I have from near the Amur two species
not determined yet of Ribes, and from
the same region I possess what I learned,

Canton, 6. January, 1860.

My dear Dr. Gray,

Some two months back I received
your interesting letter of 11 March last,
accompanied by a packet of very nicely
prepared plants, including a set of Dr.
Sartwell's beautifully put-up barices.
The parcel also included your masterly
review of Mr. Wright's Japan plants, which
has delighted me - The last portion of this
unfinished paper in my possession (pp. 421-8)
is so creased and worn, owing to its having
been sent by you through the mail, that I should
be very pleased if I could get these two
sheets replaced. The comparative table of
American and Asiatic allies is most
instructive, and I can sincerely say, that
I have seldom read an article which has
interested and pleased me more, or of which
an author ought to feel more proud. I shall
just run over this paper now, and note down
a few remarks by way of Epicrisis, just
as they occur to me. I have no Ranuncul
from Japan, but a single specimen of R.
diffusus, of. from Foochowfoo (China).

Calltha palustris grows abundantly on the Asiatic mainland in Corea and the Manchurian coast, for I have seen a good many specimens collected by officers during the Russian war. The only Trollius I have seen from these regions was a fine Manchurian species which I was inclined to refer, from his character, to T. chinensis of Bunge, only known to him (see his Enumeratio) from dried flowers procured from the Peking drug-shops or herbalists. I only got two or three specimens & sent all but one for myself to Bentham, so the determination will be settled satisfactorily by better judges than myself.

Amicifuga foetida (simplex constantly & I think perhaps distinct) is abundant on the Manch. coast. The only Akebia I have seen from Japan is Decaisne's A. lobata. I observe that Hooker & Thomson's remarks have not yet convinced you that Berberis canadensis is not a good species. Chelidonium majus appears common both in Japan, and along the opposite Asiatic coast. Dicentra spectabilis I have ^{had} from the mainland close to the Amur's territory. Cylosma (Thunbergii) japonicum does not extend down here, but

I gathered specimens of it at Amoy, no great distance to the north. I have several violets from Manchuria & Japan - not all quite satisfactorily determined, but I make out V. biflora! (compared with European specimens) V. ? uniflora, L. & V. ? japonica Langed. (a very badly-dried specimen, and a very large-leaved undetermined species - The 3rd is Japanese, the others Manchurian. I have from Manchuria Geranium pratense, & another, very likely G. erianthum. Picroasma guassioides, Penn. grows in Hongkong. I suspect you are in error in wishing to refer Bunge's Vitis ficifolia to V. Labrucea. at least specimens unhesitatingly referred by Mr. Bentham to the former species, (my no: 2072) which I sent him from Amoy, appear to me to belong to a very distinct species. I am very badly off for Grapes, & should be much indebted for an authentically named set of N. Americ. species. I have from Amoy one Ilex. I. laevigata, Blume, according to Bentham, but which I had referred, judging from diagnosis alone, to I. integra, Thunb. It extends I have little doubt to Japan, as do most likely the greater number of Amoy

description of the square stemmed one
(L. spathulata, mihi) but lost specimens
and character in 1856 at the destruction
of the factories here. I have Veronica
longifolia, L. & Pedicularis recupinata, L.
both from Mantchuria, and Polycocleum
chinense from Amoy, where it grows like
a mangrove covered by the sea in the
estuaries at high tide !! I have not yet
seen P. bontioides, perhaps the two are
mere forms; - dijudicent periti. Nepeta
glechoma grows in Hongkong, but is local
& sparing. I have Dracocephalum
Ruyechiana from Mantchuria. The
northern Scutellarias puzzle me rather.
My little Steliotropium (no: 1441) from
Amoy, scarcely seems distinct from the
S. brevifolium of Wallich. Polygonum
bistorta grows on the Mantchurian coast,
Stumulus japonicus, Sieb. & Zucc. grows
abundantly here ^(at Canton) in waste places - and
quite wild, as the Chinese tell me they
use it for nothing. It is very close to
the common Stop. Ulmus parvifolia
does not apparently extend so far
south as this place; I sent it you
from Amoy. Judging from the character,

2.
after a carefully executed comparison with
characters in detailed European floras,
distinguish from Saxifraga aspera. This
is not included in Ledebour's Flora Rossica,
which made me more cautious, but I do
not think I am mistaken. Cornus canadensis
is abundant about the Amoy, but I have
seen no Asiatic specimens of C. suecica.
Diervillae grandiflora & hortensis the same.
I have what looks like an undescribed
Lonicera from the same region, ex abnitata
L. coerulescens. Do you consider the Solidago
found at Hongkong a mere form of S. virgaurea?
It must if distinct have a wide field, for
it grows apparently all along the E. coast
of China - you call it var. leucocarpa; do you
then consider it identical with DeCandolle's
species of that name? Apropos to your
remark on Psoralea, & corroborative of
the same, I may mention that ten or
twelve years ago, when I was a less practically
experienced botanist than now, I was
induced by Siebold & Zuccarini's plate
to refer in my own collection the common
Gynura oralis or auriculata to the
genus as a new species!! I imagine my

no: 1452 from Amoy is the fixerium
japonicum, of Conyza peronicifolia, Web,
grows in Hongkong, and as far north
(at least) as Foochow foo. Youngia is a
very intricate genus, and I am quite
uncertain as to the limits of species. One
or two look very distinct, but I don't know
how character would bear out appearance
I have from Hongkong not only your
Ixeris repens, but a very nearly allied
species (a form?) with much longer
undivided but sinuated leaves, growing
like it in the loose sands by the sea.
And I think also there is another species
close to Reuther's Brachyr. ramosipennis
but really distinct, but I always feel diffident
in these matters: the Compositae seem very
protean in certain genera; Blumea, for
instance, would I think supply Fries
Jordan or Godron & Frenet with almost
as much work as Hieracium ^{or Rubus} has done
in Europe. I had referred the Choricis
Ixeris & its congener (in schedis) to
Rhabdotheca & Launaea, & I think
I sent specimens of both species to
Mr. Bentham or Sir W. Hooker.
How much the Liguliflorae want rearranging!

There is in Hongkong a Lobelia (not common)
which is I suspect Lourcero's L. chinensis.
I feel dubious as to its distinctness from
L. anceps. Ledum palustre I have from
Manchuria. I confess I do not understand
on what grounds you separate Rhododendron
and Azalea: surely the irregularly staminate
ones unite the 5-androns with the 10-androns
species into a very natural genus, and
then Linnaeus's name Azalea might be
restored to the original species (Lanceolus).
While on Ericaceae, I may mention that
Dr. Hooker is in error when in a late vol:
(not now to hand) of the New Gard. Misc.:
he says he was the first to describe the
fruit and determine the tribe of
Enkianthus. I did so some years back
in the 2nd vol: of Walpers' Annalen.
I have Primula cuneifolia, Duby, from
Manchuria, Lysimachia lubanioides, &
& 4. and two others, one a robust square
stemmed species with decurrent leaves,
from Japan. These species seem a great
focus of this pretty genus. Our pretty
little somewhat Acrotrema-like L. p.
alpestris is very distinct. I drew up a

a very long time past have had but scant
success, and work now quite single-handed.
and I fear public institutions, ^{set on foot to} fostered the
advance of science sometimes unwittingly —
discourage young laborers, to the loss and
detriment of both, apropos of which I will
tell you an anecdote. A countryman of yours,
^(a friend by the way of Mr. Eaton the Peridologist)
Dr. Bradley, formerly a clergyman of the Episcopal
Church, but obliged to give up the ministry from
constitutional irritability which rendered preaching
distressingly exciting to him, and who was lately
U. S. Consul at Ningpo, and is I believe about
to proceed to Swatow to open the Port under the
new Treaty, was conversing with me for the
first time the other day. He is a man of
superior acquirements, and would I am sure
do all he could for science. Though no
botanist, he has collected, and has a taste
for herpetology and other branches of zoology.
I was urging him, whilst representing what a
great deal a person with the inclination might
do for science, to make collections of reptiles,
etc for the Smithsonian Institution, (a compliment,
you will allow, from an Englishman) but he said
he should not do so again, for that a former
collection sent free of charge to him had
never been acknowledged. I must add that

3.

your Quercus phillyraeoides must be a
near relative of Q. Championi, Bth. I
am not sure whether our common Hongkong
thorny Smilax is the S. China or not,
but a glance some years back at some
Japanese specimens induced me to think
so. One Hongkong species is referred by
Seemann to S. perox, and I believe
this must be the same plant, for I know
only of one aculeate species here. I may
remark that I feel quite sure the
S. Hongkongensis of the same writer is
Kunth's S. Gaudichaudiana, under which
name I have distributed it. I have
Trillium obovatum from Mantchuria, &
your Dryopteris emilacina too. Maianthe-
mum is abundant all along the Mantchu-
rian coast, and Convallaria maialis too.
Amongst ferns, the only one worth noticing
which I possess is an apparently new
species of Woodzia from Mantchuria;
Lactraea paprans is also a native.
Polypodium vulgare seems unusually
common, but I merely saw one or two
specimens of Onoclea sensibilis, & could not
get one for my herbarium. I have thus
read through your remarks, adding whatever

occurred to me as illustrating the connection between the Japanese, Manchurian, and Chinese floras. You must only remember that I do all this from memory, for my herbarium is at Hongkong and nearly all my books too, and I can only add to arrange specimens here, without the means of comparison. I have as time permitted examined more or less various plants of my Amoy trip, and find amongst them ~~three~~^{two} N. American plants. No. 1469 is Parietaria debilis, Forst., to which Weddell reduces, & I think rightly, P. pennsylvanica. ~~No. 1387 I think~~ No. 994 Scirpus junceoides, Roxb., from which I cannot distinguish specimens sent by you of S. debilis, Pursh, which Nees, who certainly was more inclined to hairsplitting than to synthetic views I find also referred to it in Wight's Contributions. I am also unable to perceive any difference between the Amoy No. 1389 & Egyptian specimens of Lycopodium annulata, gathered by Brownfield, which grass Nees v. Cuscuta in his Gramineae flor. apri. austr. mentions as occurring in Royle's Indian collections. Nor can I discover any variation between no. 1387 (I think however specimens of

another Cyperus got mixed with this) and Tuscar examples of Cyperus globosus, ^{all} from Parlatore, No. 1383 is perhaps not different from Leersia mexicana, H.B.K. or L. ciliata Roxb., if the two are distinct. No. 1382 looks too near if indeed separable from Phragmites Communis, and I dare ^{say} there are other similar identifications. I shall be very glad when my whole collection is worked up. V. Martius writes me that he has named No. 1446, of which I did not find a single plant with the corolla remaining, Abelia Hanceana. I believe no. 1458 is Scleromitrium hispidum, Korth., erroneously referred to Hedyotis by Seemann, who however admits the genus, ^{in his nomenclature S. angustifolium.} The strict relationship between the floras of Japan, So: China and upper India (Kharis particularly) is very remarkable, and I doubt whether any researcher are likely to be more fruitful in throwing light on the laws of vegetable distribution than a philosophical study & comparison of the plants of these countries. The coach-flora of China wants studying from Hongkong to Japan, but unhappily there are few or no workmen - I try to incite various acquaintances to collect, but for

suppose it is likely to be in the Petersburg
or Moscow Transactions, and if so I should
be glad of sufficient indications to enable me
to order it. And perhaps you can tell me
the title, place of publication, and price, &c.
of Frautvetter & Meyer's Flora Ochotensis.
I shall be very glad when I receive a
portion of the review of Chinese plants
by Benthame which he informed me he
had sent to you for publication in
America. And I shall of course look with
the greatest impatience ^(the publication of) for "the detailed
"account of Mr. Wright's Japan plants intended
"to form a part of his general report on the
"botanical collections made during the
"cruise of Captain Rodgers' expedition."
What a worthy task it seems to me it would
be for the Smithsonian Institution to publish
a collected edition of the various works
of R. Brown! No bookseller is likely to do
this, and they deserve to be kept in print.
Many must now be unprocurable. I was sorry
to see from the wrapper of a late no. of the
Annales des sciences naturelles that Dr.
Candolle intends to discontinue the
Prodromus at the conclusion of the
Exogenous families. This is a great

4.
he made a similar complaint against the British
Museum. Now it seems a thousand pities that
a mere act of forgetfulness, usually perhaps
contracted by the sufferers as discourtesy or want
of appreciation of the trouble taken, should deprive
public institutions of the prospect of valuable
subsidia, and damp the energies of men who wd
with a little encouragement collect the products of
countries where we all know there are but few
labourers for the harvest. That there is often
ample room for these complaints I have no doubt.
For instance - three years ago I made up a very
fine set of Chinese plants & sent them to
Klotzsch for the Herb. regi. Berol., paying not
only freight by mail str. to London, but thence
to Berlin, where I know they arrived but as
yet I have never had any acknowledgements.
Again, when the Quetznai scientific corps was here
in the "Novara", I sent Tenzl a complete set
of all my duplicates, and hearing subsequently
that Kotschy, the Nubian traveller, was working
at a monograph of Quercus, I forwarded him
last spring all the So. Chinese oaks I could
lay hands on - but the receipt of neither ^{parcel} had
been acknowledged. This is of course quite
sufficient to deter me from making further con-
signments in that quarter, and I cannot

help thinking such negligence very short sighted policy, so far even as the interests of institutions are concerned. I mention to you what was said to me about the Smithsonian, because I know you are interested in it, and I am sure you will agree with what I have said. I suspect the curious resemblances in vegetation above alluded to arise from prolongations of the axis of the Himalaya into So. China, and afterwards running up parallel to the coast, which have served to introduce or extend Indian plants to this quarter. The collections of a dozen or two zealous and intelligent collectors botanists from various parts of China if examined by such philosophical observers as the authors of the flora Indica would throw a blaze of light on phytogeographical science - and I am truly rejoiced that so able and distinguished a man as yourself are working at the flora of Japan, that neutral ground where the vegetations of Asia and America appear to blend. I am inclined to think Hooker fil. almost too great a synthetist, but there can be no doubt that the vast majority of botanists especially in Germany have no reasonable conception of what is a species, and that these are

immoderately multiplied even by the more cautious, while to such men as Reichenbach pat., Jordan & others the slightest variation suffices for specific distinction. Some of Wright's species of Vaccinium figured in the Icones are of course mere forms of V. tractatum, & there is little doubt that the Hongkong V. Chinese, must be included in the category. So too I have seen from Foochow a Polypala apparently intermediate between P. japonica, Hook., & P. Loureirii, Gardn. & Champ., which I am therefore disposed to regard as forms of one species. What Turczaninow's Antennaria japonica may be I am uncertain, but I have a specimen of a plant ^{which I suppose is it} from Japan which when placed side by side with H. A. specimens of A. margaritacea scarcely differs except in its narrower more revolute leaves, and I believe Indian botanists are quite disposed to regard A. cinnamomea as a mere form of the same plant. I read somewhere or other a short time ago of some collections made in the Amir Territory by a Russian of the name of Maximovich, and which had been reported on by Prof. Fischer. Have you seen the paper, and can you tell me where it is published and if readily procurable? I

determined dried & ticketed by myself, and
this of course with my regular official duties
engaging the greater portion of my time, so
you must be an indulgent judge when you
open a parcel from me. Still, notwithstanding
these drawbacks, and the disadvantage of
being at present located here, with my family
herbarium & library at Hongkong, and finding
little more scope for collecting than I
should in Wall Street, I believe I seldom
despatch you a parcel that does not contain
a few good things; and I presume you are
not dissatisfied with novelties or rarities
other than Chinese - while I trust that
to a botanist of your eminence, who must
of necessity have a number of correspondents
looking for return specimens, nearly all
I send from China are useful in the way
of duplicates. Your position and renown
give you such advantages, that, in the matter
of exchange, I fear I must ever be largely
in your debt, but this will I am sure
never arise from causes within my control.
I am very much indebted for the little pam-
phlets, the Flora and the Railway Reports you
were so generous as to send me formerly - Any
little notices you may favor me with will at

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calamity, for I fear it will be a long
time before any one presents himself with
the inclination and means to carry on a
work of this nature into Endogens, and certainly
Kunth's work is very loosely drawn up. I
had hoped the prodomus would be completed
now it is so far advanced. Where was
Nuttall's Sylva published, and what is its
price, ye. ? Have you yet seen J. Agardh's
Theoria systematis Plantarum? It is a strange
book, but there are many hints deserving
consideration in the long prolegomena written
in very unpleasant Latin, at least I find it
difficult & crabbed to read ~~pleasantly~~, so
unlike Endlicher's style. The author maintains
that the Natural System as at present understood
is no more natural than the Linnæan - that
we have, it is true, made progress so far as to
group genera together naturally, but that even
these are not arranged sequentially according to
their degree of development, as ought to be the
case; and he complains, as it seems to me
with considerable acuteness, that the great
groups under which all modern systematists
marshal their orders, such as *Perispermaceae*,
Monopetalae, ^{*Corolliflorae*} & others are liable to the

very reproach brought against the classes of Linnaeus, of being founded on single characters alone. Altogether, the essay is a very thoughtful though a very heterodox one, & his natural orders, which are excessively multiplied, look strange to one accustomed to the usual classification. In return for your packet, I made up and despatched on the 20th ult. per ship "Cossack," through Messrs. Russell & Co's kindness, a parcel for you of tolerable size and containing I think a few very interesting plants. Mixed with these were a good number of specimens from my duplicates, not Chinese, which I was obliged to put up for you - for I did not happen to have any great number of Chinese plants by me - And I am very sorry that I could not, as you requested, return either Carex or Pharis for Dr. Farwell's beautifully prepared and valuable specimens, having not any of either. As the best substitute, I have sent all the grasses I could select, carefully named. There are also some very beautiful algae of Prof. Harvey's collecting, which I hope will be acceptable. With reference to your study of Polynesian genera, let me ask if Gymnocoma

is decidedly, as Endlicher affirms, a synonym of Acronychia, Forst. I ask because Lindley refers them to different orders, and both Seemann, subsequent to the identification by Endl. and Thwaites in his catalogue of Ceylon plants retain defans^{se} name. You ask me for Manchurian & North China plants. I beg you to believe that, desiring to do all the little in my power to advance the philosophical study of vegetable distribution, I should most heartily send you any, had I the means, and you may be sure that I shall not lose sight of your herb: whenever any opportunity occurs, but the fact is that my collections from these regions were made exclusively by medical acquaintance belonging to our navy during the Russian war, and I no longer receive any specimens from the North - indeed so far as the Amur territory is concerned, as there is a thriving trade carried on between the Russian possessors & the U. S. you perhaps possess greater facilities than myself. I had hoped, & indeed still hope eventually to remove to Japan, and if so you may rely on my doing my utmost to satisfy you. At present I get all the plants I distribute from exchanges or else from collections made entirely by my own hands,

and probably reptiles generally, as the occurrence of Menopoma (Cryptobranchus) in both countries ~~is~~ is very remarkable. I have nothing in the shape of news which wd. interest you, to communicate. Thwaites seems to be working vigorously in Ceylon, whence he sent me a fine set of plants, many quite new, the other day. Remember me to Mr. Wright, when next you correspond with him; I suppose and hope his Cuba collections will be available for Dr. Grisebach's Flora of the West Indies.

I fear I ought to apologise for the immoderate length to which I have spun out this letter, but I hope you will take it as a proof of the great interest I have derived from your communication, and of the value I attach to your correspondence.

Pray believe me to be,

My dear Dr. Gray,

Very faithfully Yours

A. S. WARD.

^{6.}
all times be most acceptable. I know these things are not generally procurable for money. Of course I conclude that the giving me these papers puts you to no expense. I am always most desirous of defraying all charges for freight or other expenses arising from the purchase or transmission of packets and could probably do so through Russell & Co. The copy you sent me of Plantae Fendlerianae leaves off at the genus "Synthlipsis," & I have only part 2 (not 1) of Pl. Lindheimerianae. I shall take the liberty of enumerating a number of things I should be glad of, merely as an indication, in case any of them are lying by amongst your duplicates. The following are the only species of Carex enumerated in your manual which are not in my herbarium.

C.C. Sartwellii, vulpina, sychaecephala, aperta, aquatilis, lenticularis, salina, maritima, flacca, atrata, Torreyi, aestivalis, praecox, Sullivantii, laciniata, fulva, polymorpha (Haleyan), anictata, mirata, rostrata, stenolepis, gigantea, vesicaria, ampullacea (proper). The genus is a particular favorite of mine, and either the above or species from any part of the world, if reliably named, will be most welcome. I have very few likewise of the large number of species from the United States, and these

family I take great interest in. Willows, oaks, maples, ashes & timber trees generally I desire. but the oaks ought to be in fruit - a few sent by you were merely in leaf & I do not add imperfect specimens to my herbarium. Any of the analogues to Japanese species from the N.W. Coast of Amer: enumerated in your comparative table would of course possess great value to me. Through your liberality I possess a large portion of the common plants of the United States, but the innumerable novelties from the Mexican flora especially the Calais & others ^{Compositae} of which you have described such a number are quite unknown to me. But you will understand me not to ask for rare plants of which very few specimens are procurable & which are of course far better given to large public institutions where they can be made available for study. The genus Ranunculus has always been a favorite of mine. I have most of the European species and a very fair set of those enumerated in the Flora Indica, but I scarcely possess one of the peculiar American species, which would be very acceptable. Amongst your ferns I am without Woodwardia, Asplenium pinnatifidum, A.

montanum, Woodzia obtusa, W. illoensis, Cystopteris bulbifera, Aspidium noveboracense, A. Boothii, Schizaea pusilla Bemunda Claytoniana, Botrychium lunarioides Lycopodium alopecuroides, L. carolinianum Selaginella rupestris - and all 3 spp. of Jevites. The following genera would also be welcome. Vaccinia, & other Amer: ^{Cupressidae} Cruiciferae Calais, ^{Luzia + allii Myricae} Dalea, Hedyotis & affines (except the very common Oldelandria), Corygium, Acacia, Sophora, Zinnia & aff. (I indeed all small Mexican ^{+ Californian} Compositae), Alismaceae, ^{Eriogonum} Peters, (other than the very common ones all of which I have), ^{Ribes} Glyceria, ^{Polygalae} Viola, especially the least common - ^{esp. Ceanothus} Rhamnaceae, Cyperaceae particularly the numerous Phyachosporae & other especially American species, Lonicera, ^{Lotus, Rosarckia, Desmodium} Lupinus, ^{+ Rosaceae generally} Rubus (except the common ones) & Trifolium, Borragineae, ^{Saxifragae sive Latiore} & any Gentianeae not included in the Manual, Euphorbia, Quercus, ^{Garrya} Juncus, & the rarer Chilanthus. Any remarks on ^{my plants} errors detected in my tickets will be thankfully received if communicated. Are you aware whether Japanese zoology has any very intimate relationship with that of North Amer.? It occurs to me that there must be considerable resemblance in the Salamandridae